

DNM 5AX series



5-Axis Vertical
Machining Center

DNM 5AX series
DNM 200/5AX
DNM 350/5AX

Basic Information

Basic Structure
Cutting
Performance

Detailed Information

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DNM 5AX series

The DNM 5AX Series are high performance 5 axes vertical machining centers designed for easy operation, even for users who have no previous experience of 5 axis machining.

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Optimized Column and Bed Design

High feedrate and precision have been realized by optimized column and bed design with 3D simulation technique.

Direct Coupled Spindle

Direct-coupled spindle minimized noise and vibration. High speed and heavy-duty cutting can be performed with a single setting.

High-precision Travel System

Roller-type LM guideways and high-rigidity coupling have been adopted to ensure excellent rigidity and accuracy of the X, Y and Z linear travel system.

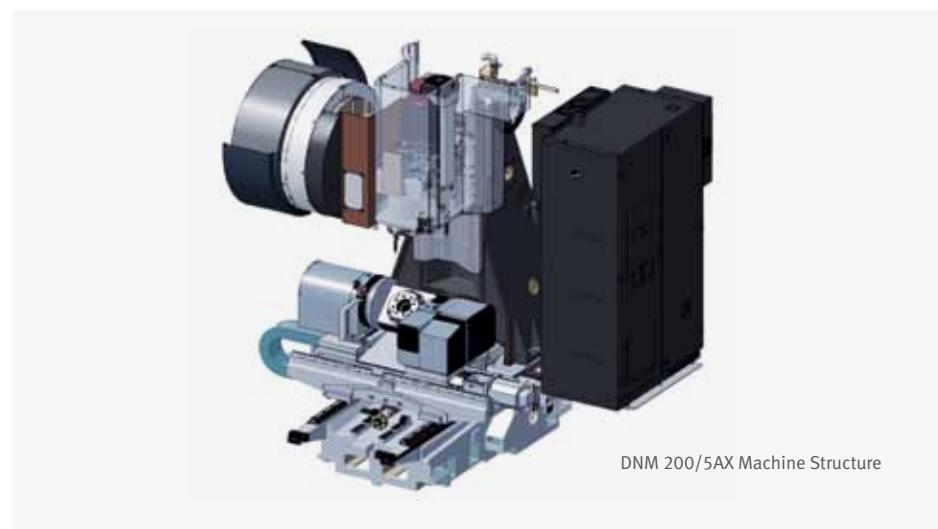


Basic Structure

High feedrate and precision cutting achieved by optimized column and bed design.

High-precision Machine Structure

High speed cutting & the highest accuracy with high precision machine structure.

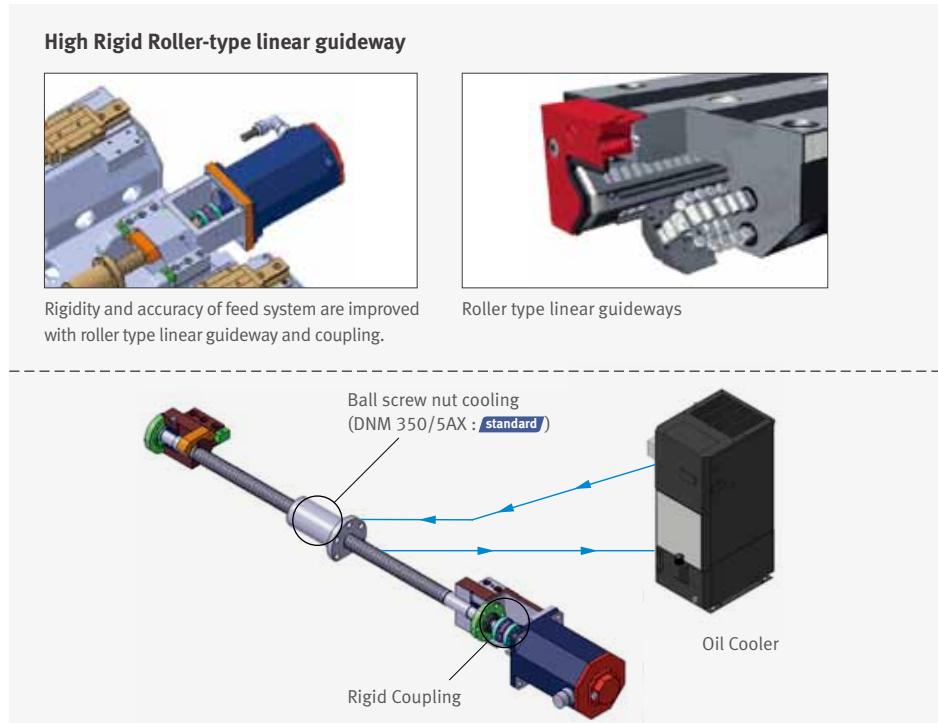


Axis drive system

High-precision Travel System

High rigidity and precision of the X,Y,Z axis drive systems are achieved by using roller type linear guideways and highly rigid couplings. Speed and accuracy are further enhanced with the nut cooling system which minimizes thermal error of ball screws.

(Nut cooling system : Only DNM 350/5AX)



Item	X	Y	Z	
DNM 200/5AX	Travels mm (inch)	400 (+200, -200) (15.75 (+7.87, -7.87))	435 (+180, -255) (17.13 (+7.09, -10.04))	500 (19.69)
	Rapid traverse m/min (ipm)	36 (1417.3)	36 (1417.3)	30 (1181.1)
DNM 350/5AX	Travels mm (inch)	600 (23.62)	655 (25.79)	500 (19.69)
	Rapid traverse m/min (ipm)	36 (1417.3)	36 (1417.3)	30 (1181.1)



Tool Changer

Along with rapid tool change that enables higher productivity, a wide range of choices is available for tool magazines.

Automatic Tool Changer (ATC)

Enhanced productivity achieved with the CAM-type tool changer that supports faster tool changing.



Item	Number of tools (ea)	T-T-T (s)
DNM 200/5AX	30 (40)	1.3
DNM 350/5AX	30 (40, 60)	1.3



Rotary table

Wide machining area for various workpiece and machine set up.

Max. Size & Weight of Work

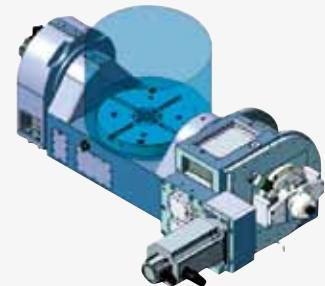
DNM 200/5AX

Max. workpiece swing diameter x height

Ø300 x 200mm (11.8 / 7.9 inch)

Table loading capacity (A-axis 0°)

60kg (132.3 lb)



DNM 350/5AX

Max. workpiece swing diameter x height

Ø400 x 335mm (15.7 / 13.2 inch)

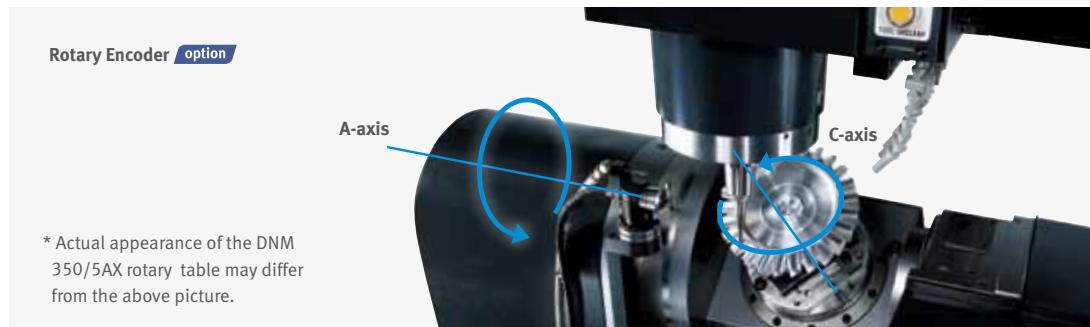
Table loading capacity

250kg (551.1 lb)

* Actual appearance of the DNM 200/5AX rotary table may differ from the above picture.

Rotary Table

- Applied with high-rigidity, high-precision axial and radial roller bearings
- Backlash reduced with higher structural stability
- A and C axes are hydraulically clamped for maximum rigidity



Item	A-axis	C-axis
DNM 200/5AX	Travels (deg)	150 (+30, -120)
	Rapid traverse (r/min)	20
DNM 350/5AX	Travels (deg)	150 (+30, -120)
	Rapid traverse (r/min)	20
		360
		30
		360
		30



Spindle

Direct-coupled spindle head minimizes noise and vibration.

Direct Coupled High Precision Spindle

Direct coupled, high precision spindles supports high speed and heavy duty cutting in a single set up. Machining performance is optimised by minimising vibration and noise, while power loss at high speed is also minimised.



Max. spindle speed

12000r/min

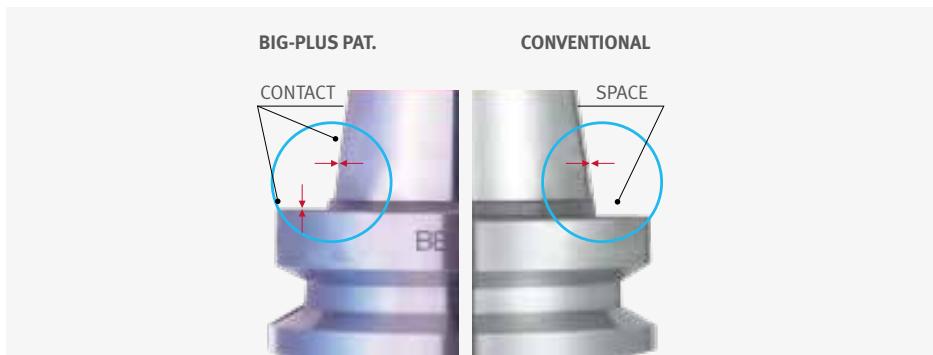
(DNM 350/5AX : 20000 r/min **option**)

Spindle motor power

18.5 / 11 kW
(24.8 / 14.8 Hp)

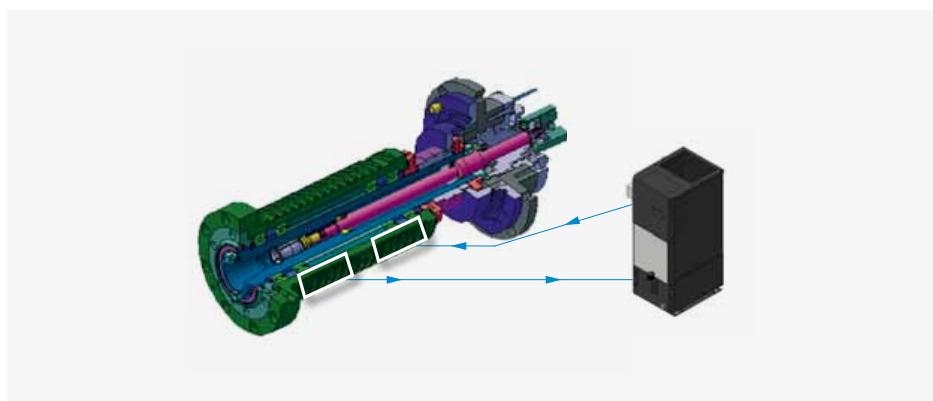
Dual Contact Spindle

Tool rigidity is enhanced by firm clamping with the spindle, while tool life cycle and cut-surface roughness are improved due to reduced vibration realized by dual contact spindle.



Spindle Cooling

High-accuracy oil cooler minimizes thermal error of the spindle by removing the heat generated at the bearings and motor.



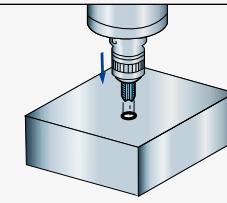
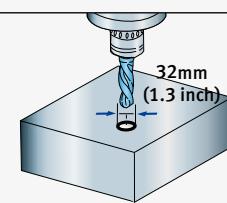
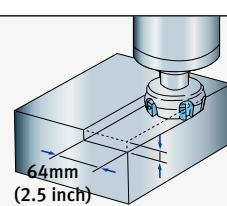


Cutting Performance

From high-speed machining to heavy duty cutting, diverse machining processes are applicable for complex-shaped workpiece.

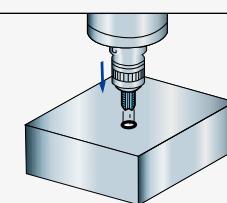
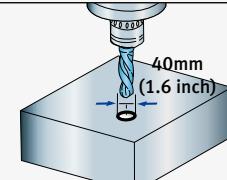
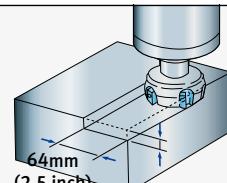
DNM 200/5AX

Face mill Carbon steel (SM45C)				
ø80mm Face Mill (6Z)				
Machining removal rate	Spindle speed	Feed rate		
269 cm ³ /min (16.42 inch ³)	1500 r/min	2100 mm/min (82.7 ipm)		
Drill Carbon steel (SM45C)				
ø32mm Drill (2Z)				
Spindle speed	Feed rate			
1200 r/min	120 mm/min (4.7 ipm)			
Tap Carbon steel (SM45C)				
ø73mm Drill (2Z)				
Tool	Spindle speed			
M30 x 3.5	212 r/min			



DNM 350/5AX

Face mill Carbon steel (SM45C)				
ø80mm Face Mill (5Z)				
Machining removal rate	Spindle speed	Feed rate		
365 cm ³ /min (22.3 inch ³)	1500 r/min	1900 mm/min (74.8 ipm)		
Drill Carbon steel (SM45C)				
ø40mm Drill (2Z)				
Spindle speed	Feed rate			
1200 r/min	180 mm/min (7.09 ipm)			
Tap Carbon steel (SM45C)				
ø73mm Drill (2Z)				
Tool	Spindle speed			
M30 x 3.5	212 r/min			



* The results, indicated in this catalogue are provides as example. They may not be obtained due to differences in cutting conditions and environmental conditions during measurement.



Standard / Optional Specifications

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Customer Support Service

Diverse optional features are available to meet specific customer requirements.

● Standard ○ Optional X N/A

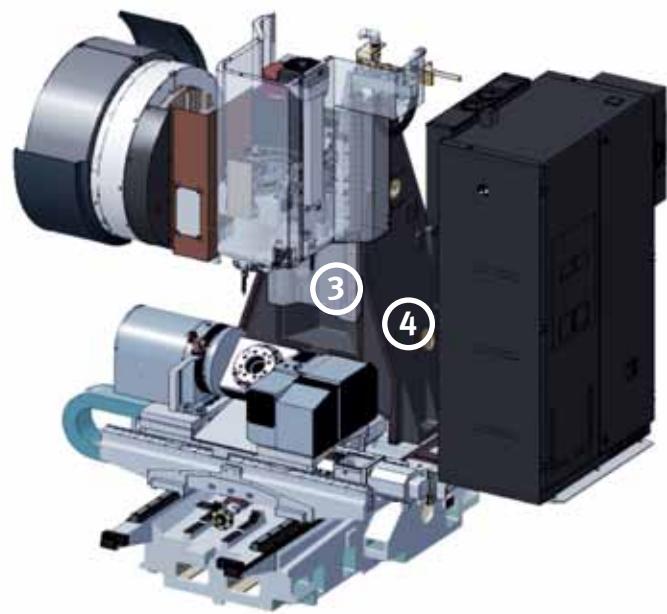
NO.	Description	Features	DNM 200/5AX	DNM 350/5AX
1	Air blower		○	○
2	Air gun		○	○
3	Automatic tool changer	30 Tools	●	●
4		40 Tools	○	○
5		60 Tools	X	○
6	Automatic tool measurement	TS27R : RENISHAW	○	○
7	Automatic workpiece measurement	NONE	●	●
8		OMP60_RENISHAW	○	○
9	Chip conveyor	Hinge / Scraper / Drum filter type		
10	Coolant gun		○	○
11	Coolant Tank		●	●
12	Easy Operation Package	Tool load monitor	●	●
13		Alram / M-code / G-code / ATC recovery help	●	●
14		Table moving for setup / Easy work coordinate setting	●	●
15	Electric cabinet air conditioner		○	○
16	Electric cabinet light		○	○
17	Electric cabinet line filter		○	○
18	Linear scale	X Axis	○	○
19		Y Axis	○	○
20		Z Axis	○	○
21	MPG	1 MPG_PORTABLE TYPE	●	●
22		1 MPG_PORTABLE_W/ENABLE TYPE	○	○
23		3 MPG_PORTABLE	○	○
24	NC System	DOOSAN FANUC i	●	●
25		FANUC 31iB5	X	○
26		HEIDENHAIN	X	○
27	NC system lcd size	10.4 inch_FANUC (Color)	●	●
28		15.1 inch_HEIDENHAIN (Color)	X	○
29	Oil Skimmer	Belt Type	○	○
30	Power transformer		○	○
31	Shower coolant		○	○
32	Spindle motor power	18.5 / 11 kW (24.8 / 14.8 Hp)	●	●
33		22 / 18.5 kW (29.5 / 24.8 Hp)	X	○
34		22 / 11 kW (29.5 / 14.8 Hp)	X	○
35	Spindle speed	12000 r/min	●	●
36		20000 r/min	X	○
37	Test bar		○	○
38	Through spindle coolant	NONE	●	●
39		1.5 KW_2.0 MPA	○	○
40		4.0 KW_2.0 MPA	○	○
41		5.5 KW_7.0 MPA_DUAL BAG FILTER	○	○
42	Work & tool counter	WORK / TOOL	○	○

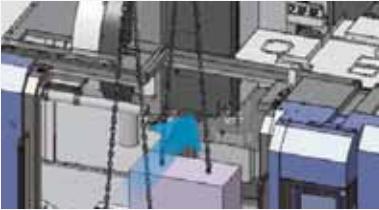


Optional Equipments

Convenience

Various optional equipment maximize the convenience and productivity.



1. Chip conveyor <small>option</small>	2. Large capacity coolant tank built-in with chip pan and box filter <small>Coolant tank capacity 360L</small>
 Hinge type Scraper type Drum filter type	 Easier chip disposal with box-type filter
3. Shower coolant <small>option</small>	4. Coolant system
	
5. Auto-door type top cover <small>The top cover helps enhancing convenience when loading/unloading heavy workpiece on the processing table.</small>	6. Internal screw conveyor
	

**Convenience****Operating Console****Basic Information**

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Operator convenience and work efficiency have been improved with adoption of various convenient control functions and ergonomic design.



1. 10.4" Color TFT LCD Monitor	2. Membrane Keyboard	3. Portable MPG

4. Hot Key	5. Swiveling Operation Panel The operation panel can swivel up to 100° improving user convenience.	
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Convenient Absolute Feed

The current position of the machine is stored and maintained using battery power. Zero point return is not necessary after a power cycle.

System Condition Indicator**LED Indoor Work Light**



Easy Operation Package (E.O.P)

These Doosan software packages have been customized to provide fast and easy setup of tooling, workpiece, and program. These functions minimize the idle time caused by process setup and maximize the machine's productivity.

Adaptive Feed Control (AFC)

Function to control feedrate so that the cutting can be carried out at a constant load
(To adapt to the spindle load set up with constant load feedrate control function)

Tool Management

Function to manage tool information
[Tool information]
- Tool No. / Tool name
- Tool condition : normal, large diameter, worn/damaged, used for the first time, manual

Tool Load Monitor

Function to automatically monitor tool load
(Different loads can be set for one tool according to M700 ~ M704)

Pattern Cycle & Engraving

Function to create frequently-used cutting programs automatically
- Pattern Cycle: creates a program for a pre-defined shape
- Engraving: creates a program for cutting a shape described with characters **option**

Work Offset Setting

Function to configure various work offset settings

Alarm Guidance

Function to show detailed info on frequently triggered alarms and recommended actions

Sensor Status Monitor

Function to view sensor conditions of the machine

ATC Recovery

Function to view detailed info with recommended actions and to perform step-by-step operation manually
(when an alarm is triggered during an ATC operation)

Spindle**Basic Information**

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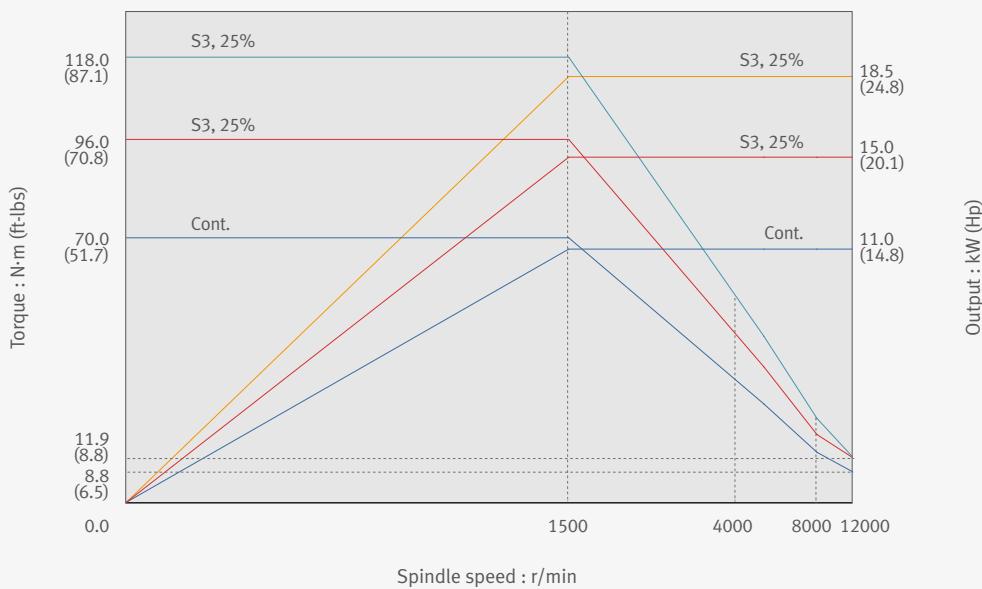
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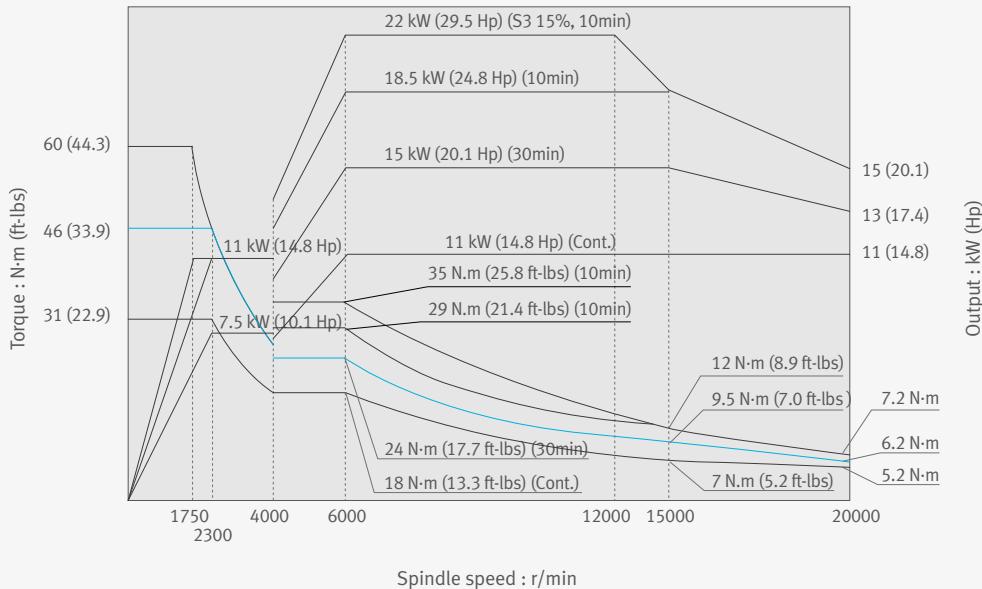
Customer Support Service**Spindle Power – Torque Diagram****DNM 200/5AX & DNM 350/5AX**

Max. spindle speed : 12000 r/min

Spindle motor power : 18.5 / 11 kW (24.8 / 14.8 Hp)

**DNM 350/5AX**Max. spindle speed : 20000 r/min **option** (Only DNM 350/5AX)

Spindle motor power: 22 / 11 kW (29.5 / 14.8 Hp)

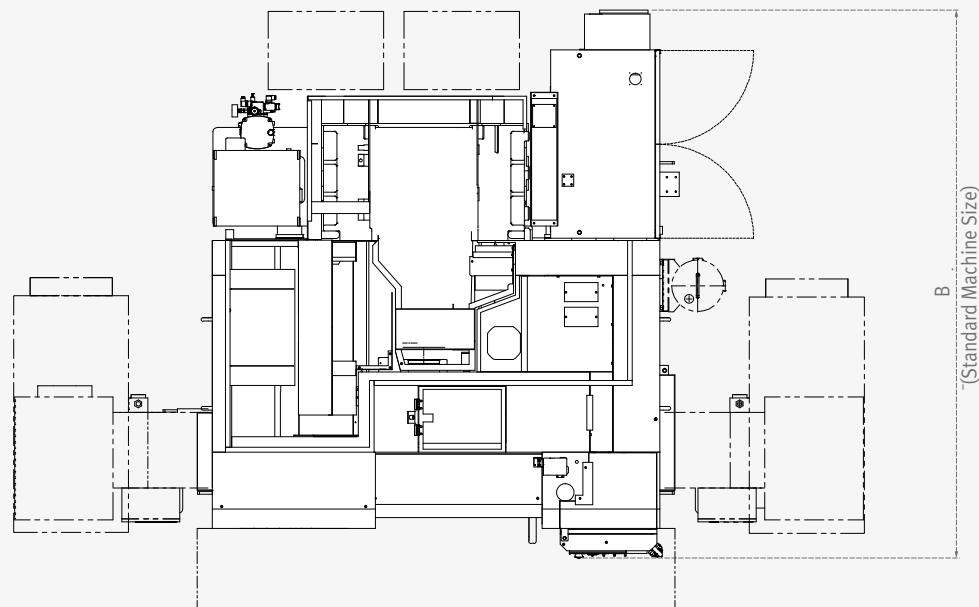


External Dimensions

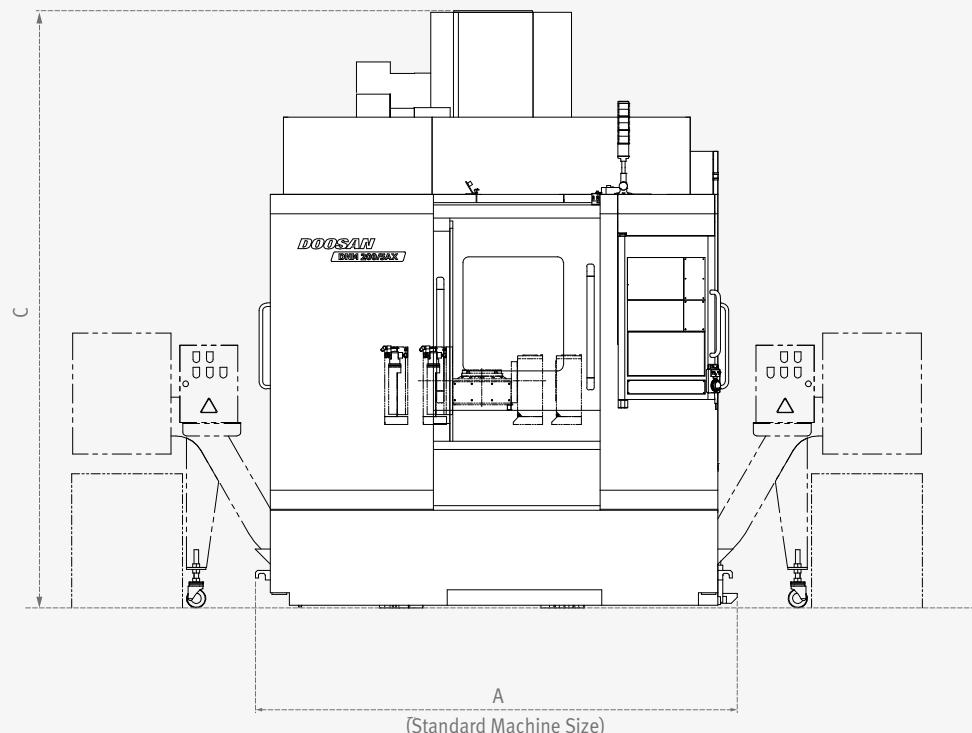
DNM 200/5AX

Unit: mm (inch)

Top View



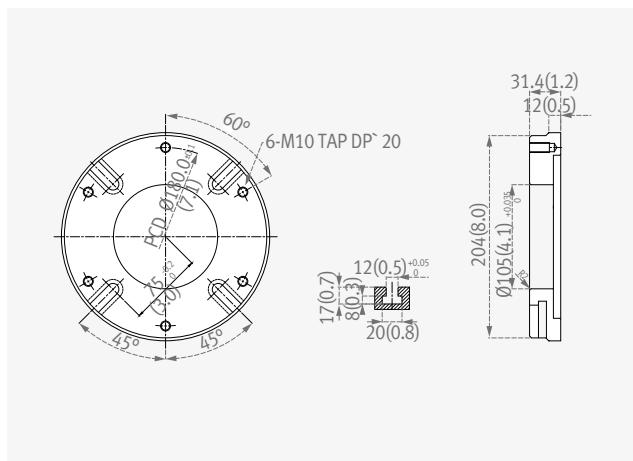
Front View



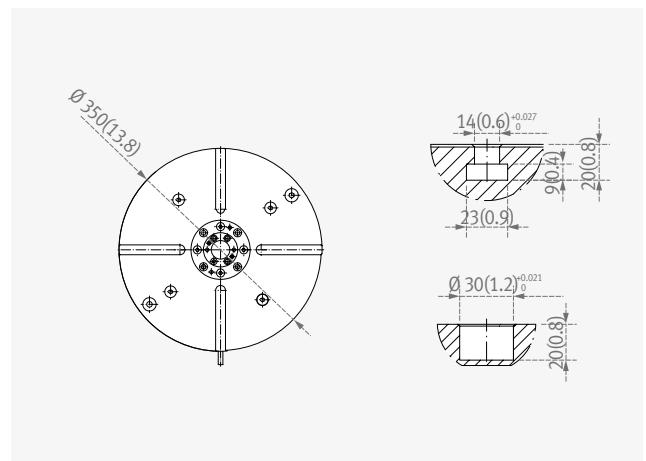
Model	A [with Chip Conveyor]	B	C
DNM 200/5AX	2490 [3447] (98.0 [135.7])	2835 (111.6)	3091 (121.7)
DNM 350/5AX	3150 [4085] (124.0 [160.8])	3209 (126.3)	3190 (125.6)

Table dimension**DNM 200/5AX**

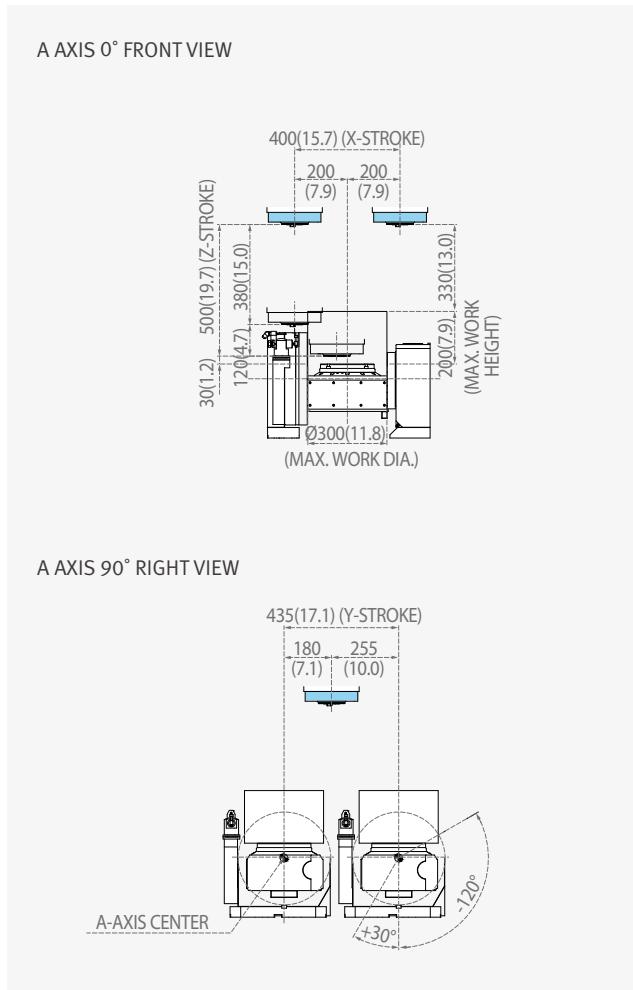
Unit: mm (inch)

**DNM 350/5AX**

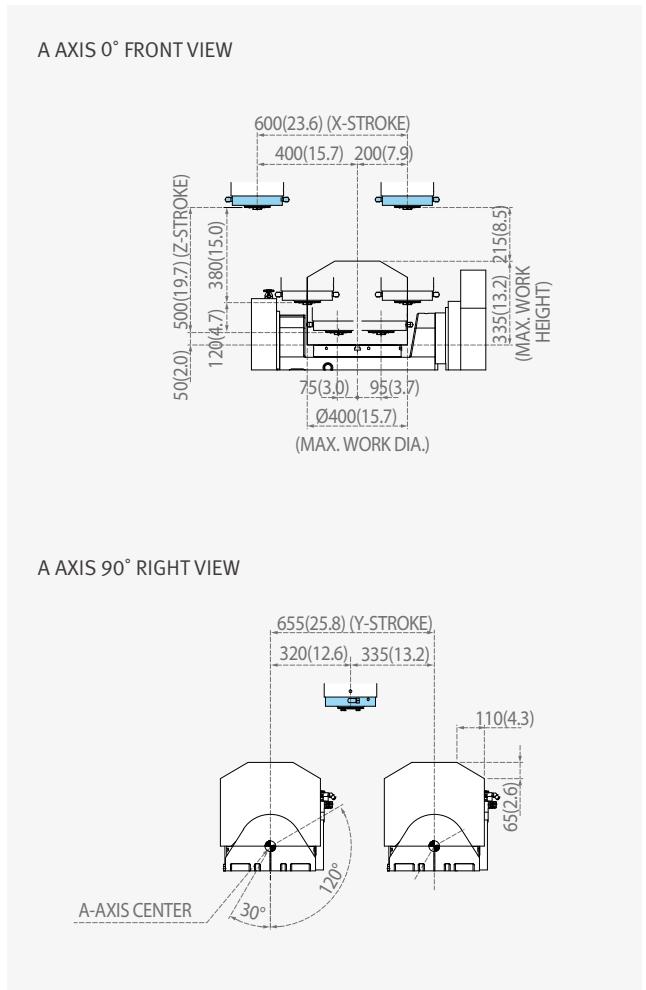
Unit: mm (inch)

**Machining Area****DNM 200/5AX**

Unit: mm (inch)

**DNM 350/5AX**

Unit: mm (inch)

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Machine Specifications



Description		Unit	DNM 200/5AX	DNM 350/5AX
Travel	Travel distance	X	mm (inch)	400 (15.7)
		Y	mm (inch)	435(+180, -255) (17.1 (+7.1, -10.0))
		Z	mm (inch)	500 (19.7)
		A	deg	150 (+30 ~ -120)
		C	deg	360
	Distance from spindle nose to table top	mm (inch)	30 ~ 530 (1.2 ~ 20.9)	50 ~ 550 (2.0 ~ 21.7)
Feedrate	Rapid traverse rate	X	m/min (ipm)	36 (1417.3)
		Y	m/min (ipm)	36 (1417.3)
		Z	m/min (ipm)	30 (1181.1)
		A	r/min	20
	Cutting feedrate	C	r/min	30
		X, Y, Z	m/min (ipm)	15000 (590.6)
		A, C	deg/min	7200
Table	Table size	mm (inch)	Ø200 (7.9)	Ø350 (13.8)
	Table loading capacity	kg (lb)	40 (88.2) (Horizontal) / 60 (132.3) (Vertical)	250 (551.1)
	Table type	-	T-SLOT (12H8)	T-SLOT (14H8)
Spindle	Max. spindle speed	r/min	12000	12000 (20000)
	Spindle taper	-	ISO #40, 7/24 TAPER	
	Max. spindle torque	N·m (ft-lbs)	117 (86.3)	117 { 167 / 60 } (86.3 { 123.2 / 44.3 })
Automatic tool changer	Type of tool shank	-	MAS403 BT 40	
		-	{ CAT 40 }	
		-	{ DIN 69871-A40 }	
	Tool storage capacity	ea	30 { 40 }	30 { 40, 60 }
	Max. tool diameter (Continuous)	mm (inch)	30 Tools : 80 / 40 Tools : 76	
	Max. tool diameter (Near port empty)	mm (inch)	30 Tools : 125 / 40 Tools : 125	
	Max. tool length	mm (inch)	300 (11.8)	Ø80 : 270 / Ø125 : 210 (3.15 : 10.6 / 4.9 : 8.3)
	Max. tool weight	kg (lb)	8 (17.6)	
	Method of tool selection	-	Memory Random	
	Tool change time (tool-to-tool)	s	1.3	
Motor	Tool change time (chip-to-chip)	s	3.7	
	Spindle motor power	kW (Hp)	18.5 / 11 (24.8 / 14.8)	18.5 / 11 (22 / 18.5 or 22 / 11) (24.8 / 14.8 (29.5 / 24.8 or 29.5 / 14.8))
	Coolant pump motor power	kW (Hp)	0.25 (0.3)	0.4 (0.5)
Power source	Electric power supply	kVA	31.3	40.6 (45.7)
	Compressed air supply	Mpa (psi)	0.54 (78.3)	
Tank capacity	Coolant pump capacity	L (galon)	5.5 (1.5)	13 (3.4)
	Lubrication tank capacity	L (galon)	3.1 (0.8)	
Machine size	Height	mm (inch)	3091 (121.7)	3190 (125.6)
	Length	mm (inch)	2835 (111.6)	3209 (126.3)
	Width	mm (inch)	2490 (98.0)	3150 (124.0)
	Weight	kg (lb)	5500 (4059.0)	8500 (6273.0)
NC System		-	DOOSAN FANUC i / FANUC 31i-5 / HEIDENHAIN	

NC Unit Specifications

● Standard ○ Optional X N/A

FANUC

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Customer Support Service

No.	Division	Item	Spec.	DOOSAN FANUC i	FANUC 31i-5
1	AXES CONTROL	Controlled axes	3 (X,Y,Z)	X,Y,Z,C,A	X,Y,Z,C,A
2		Additional controlled axes	5 axes in total	●	●
3		Least command increment	0.001 mm / 0.0001"	●	●
4		Least input increment	0.001 mm / 0.0001"	○	●
5		Interpolation type pitch error compensation		○	○
6	INTERPOLATION & FEED FUNCTION	2nd reference point return	G30	●	●
7		3rd / 4th reference return		●	●
8		Inverse time feed		●	○
9		Cylindrical interpolation	G07.1	●	○
10		Helical interpolation B	Only Fanuc 30i	-	○
11		Smooth interpolation		-	○
12		NURBS interpolation		-	○
13		Involute interpolation		-	○
14		Helical involute interpolation		-	○
15		Bell-type acceleration/deceleration before look ahead interpolation		●	●
16		Smooth backlash compensation		○	●
17		Automatic corner override	G62	●	○
18		Manual handle feed	Max. 3unit	1 unit	1 unit
19	SPINDLE & M-CODE FUNCTION	Manual handle feed rate	x1, x10, x100 (per pulse)	●	●
20		Handle interruption		●	○
21		Manual handle retrace		○	○
22		Manual handle feed 2/3 unit		-	○
23		Nano smoothing	AI contour control II is required.	○	●
24		AICC II	200 BLOCK	●	●
25		AICC II	400 BLOCK	-	○
26		High-speed processing	600 BLOCK	-	○
27		Look-ahead blocks expansion	1000 BLOCK	-	○
28		DSQ I	AICC II (200block) + Machining condition selection function	-	●
29		DSQ II	AICC II (200block) + Machining condition selection function + Data server(1GB)	-	○
30		DSQ III	AICC II with high speed processing (600block) + Machining condition selection function + Data server (1GB)	-	○
31	TOOL FUNCTION	M- code function		●	●
32		Retraction for rigid tapping		●	●
33		Rigid tapping	G84, G74	●	●
34		Number of tool offsets	64 ea	-	64 ea
35		Number of tool offsets	99 / 200 ea	-	○
36		Number of tool offsets	400 ea	400 ea	○
37		Number of tool offsets	499 / 999 / 2000 ea	-	○
38		Tool nose radius compensation	G40, G41, G42	●	●
39		Tool length compensation	G43, G44, G49	●	●
40		Tool life management		●	●
41	PROGRAMMING & EDITING FUNCTION	Addition of tool pairs for tool life management		●	○
42		Tool offset	G45 - G48	●	○
43		Custom macro		●	●
44		Macro executor		●	●
45		Extended part program editing		●	●
46		Part program storage	256KB(640m)	-	640m
47		Part program storage	512KB (1,280m)	1280m	○
48		Part program storage	1MB (2,560m)	-	○
49		Part program storage	2MB (5,120m)	○	○
50		Part program storage	4MB (1,0240m)	-	○
51	OTHERS FUNCTIONS (Operation, setting & Display, etc)	Part program storage	8MB (2,0480m)	-	○
52		Inch/metric conversion	G20 / G21	●	●
53		Number of Registered programs	400 ea	400 ea	-
54		Number of Registered programs	500 ea	-	500 ea
55		Number of Registered programs	1000 / 4000 ea	-	○
56		Optional block skip	9 BLOCK	●	○
57		Optional stop	M01	●	●
58		Program file name	32 characters	-	●
59		Program number	04-digits	●	-
60		Playback function		●	○
61	OTHERS FUNCTIONS (Operation, setting & Display, etc)	Addition of workpiece coordinate system	G54.1 P1 - 48 (48 pairs)	48 pairs	48 pairs
62		Addition of workpiece coordinate system	G54.1 P1 - 300 (300 pairs)	-	○
63		Embedded Ethernet		●	●
64		Graphic display	Tool path drawing	●	●
65		Loadmeter display		●	●
66		Memory card interface		●	●
67		USB memory interface	Only Data Read & Write	●	●
68		Operation history display		●	●
69		DNC operation with memory card		●	●
70		Optional angle chamfering / corner R		●	●
71	OTHERS FUNCTIONS (Operation, setting & Display, etc)	Run hour and part number display		●	●
72		High speed skip function		●	○
73		Polar coordinate command	G15 / G16	●	○
74		Polar coordinate interpolation	G12.1 / G13.1	-	○
75		Programmable mirror image	G50.1 / G51.1	●	○
76		Scaling	G50, G51	●	○
77		Single direction positioning	G60	●	○
78		Pattern data input		●	○

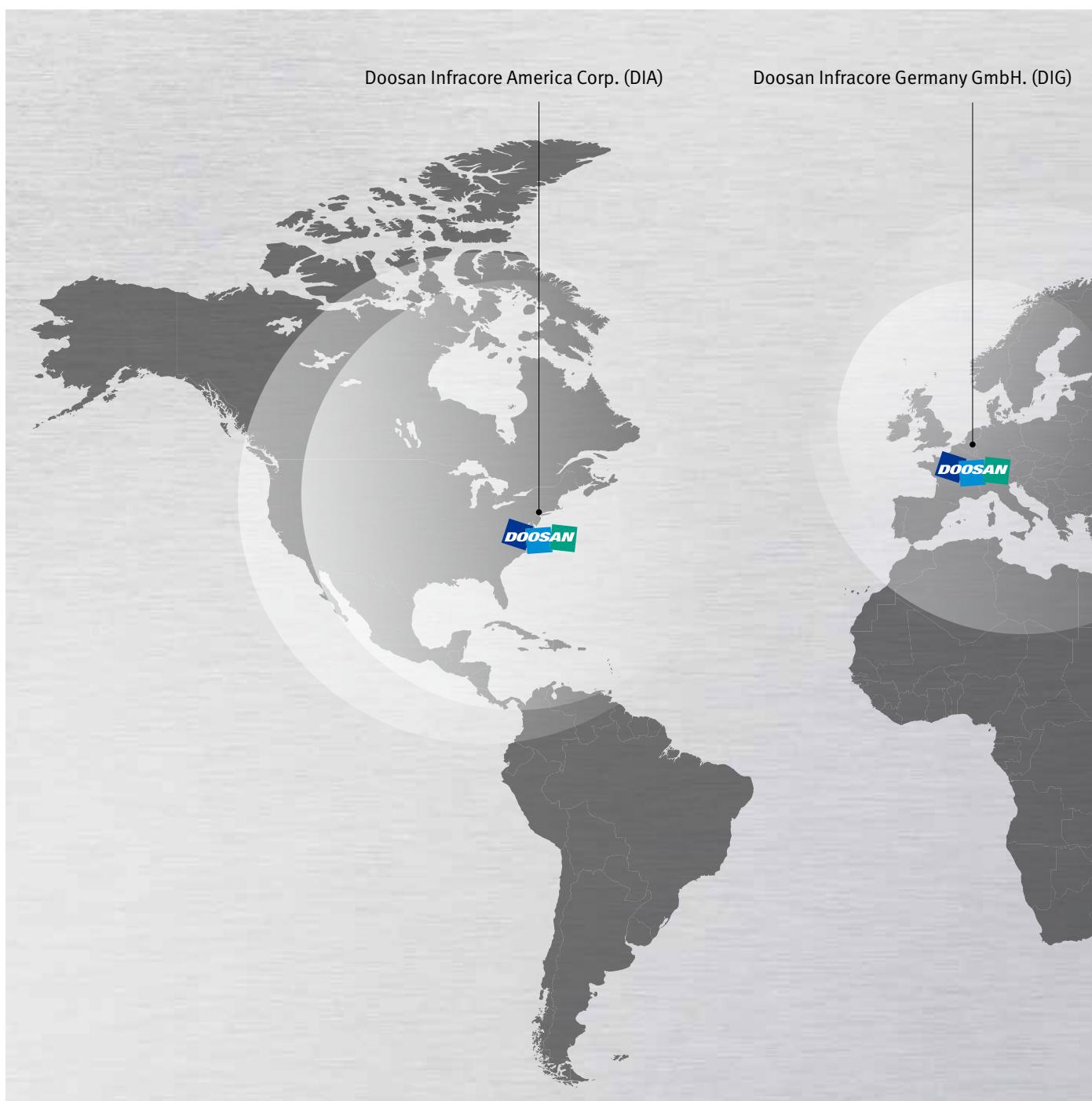
NC Unit Specifications

HEIDENHAIN

● Standard ○ Optional X N/A

NO.	Division	Item	Spec.	iTNC 530
1	Axes	Controlled axes	3 axes / 4 axes /5 axes	X
2		Least command increment	0.0001 mm (0.0001 inch), 0.0001°	X
3		Least input increment	0.0001 mm (0.0001 inch), 0.0001°	X, Y, Z, C, A
4		Maximum commandable value	±99999.999mm (±3937 inch)	●
5		MDI / DISPLAY unit	15.1 inch TFT color flat panel	●
6		Program memory for NC programs	SSDR	●
7		Block processing time		●
8		Cycle time for path interpolation	CC 61xx	21GB
9		Encoders	Absolute encoders	0.5 ms
10	Commissioning and diagnostics	Data interfaces	Ethernet interface	3 ms
11			USB interface (USB 2.0)	EnDat 2.2
12	Machine functions	Look-ahead	Intelligent path control by calculating the path speed ahead of time (max. 1024 blocks.)	●
13		HSC filters		●
14		Switching the traverse ranges		●
15	User functions	Program input	According to ISO	●
16			With smarTNC	●
17		Position entry	Nominal positions for lines and arcs in Cartesian coordinates	●
18			Incremental or absolute dimensions	●
19			Display and entry in mm or inches	●
20			Display of the handwheel path during machining with handwheel superimposition	●
21			Paraxial positioning blocks	●
22		Tool compensation	In the working plane and tool length	●
23			Radius-compensated contour lookahead for up to 99 blocks (M120)	●
24			Three-dimensional tool radius compensation	●
25		Tool table	Central storage of tool data	●
26			Multiple tool tables with any number of tools	●
27		Cutting-data table	Calculation of spindle speed and feed rate based on stored tables	●
28		Constant contouring speed	relative to the path of the tool center or to the tool's cutting edge	●
29		Parallel operation	Creation of a program while another program is being run	●
30		Tilting the working plane with Cycle 19		●
31		Tilting the working plane with the PLANE function		●
32		Manual traverse in tool-axis direction	after interruption of program run	●
33		Function TCPM	Retaining the position of tool tip when positioning tilting axes	●
34		Rotary table machining	Programming of cylindrical contours as if in two axes	●
35		FK free contour programming	Feed rate in distance per minute	●
36		Program jumps	for workpieces not dimensioned for NC programming	●
37		Program verification graphics	Subprograms and program section repeats	●
38		Programming graphics	Calling any program as a subprogram	●
39		Program-run graphics	Plan view, view in three planes, 3-D view	●
40		Datum tables	3-D line graphics	●
41		Preset table	(plan view, view in three planes, 3-D view)	●
42		Freely definable table	Saving of workpiece-specific datums	●
43		Returning to the contour	Saving of reference points	●
44			after interruption of program run	●
45			With mid-program startup	●
46			After program interruption (with the GOTO key)	●
47		Autostart		●
48		Actual position capture		●
49		Enhanced file management		●
50		Context-sensitive help for error messages		●
51	Fixed cycles	TNCguide	Browser-based, context-sensitive helpsystem	●
52		Calculator		●
53		Entry of text and special characters		●
54		Comment blocks in NC program		●
55		"Save As" function		●
56		Structure blocks in NC program		●
57		Entry of feed rates	FU (feed per revolution)	●
58			FZ (tooth feed per revolution)	●
59			FT (time in seconds for path)	●
60			FMAXT (only for rapid traverse pot: time in seconds for path)	●
61	Cycles for automatic workpiece inspection	Working plane	Cycle 19	●
62		Cylinder surface	Cycle 27	●
63		Cylinder surface slot milling	Cycle 28	●
64		Cylinder surface ridge milling	Cycle 29	●
65	Options	Calibrate TS		●
66		Calibrate TS length		●
67		Measure axis shift		●
68	Options	Software option 1		●
69		Rotary table machining	Programming of cylindrical contours as if in two axes	
70			Feed rate in mm/min	
71		Coordinate transformation	Tilting the working plane, PLANE function	
72		Interpolation	Circular in 3 axes with tilted working plane	
73		Software option 2		●
74		3-D machining	3-D tool compensation through surface normal vectors	
75			Tool center point management (TCPM)	
76			Keeping the tool normal to the contour	
77			Tool radius compensation normal to the tool direction	
78		Interpolation	Line in 5 axes (subject to export permit)	
79			Spline: execution of splines (3rd degree polynomial)	

Responding to Customers Anytime, Anywhere



Global Service Support Network

Corporations

5

Dealer Networks

128

Technical Centers

21

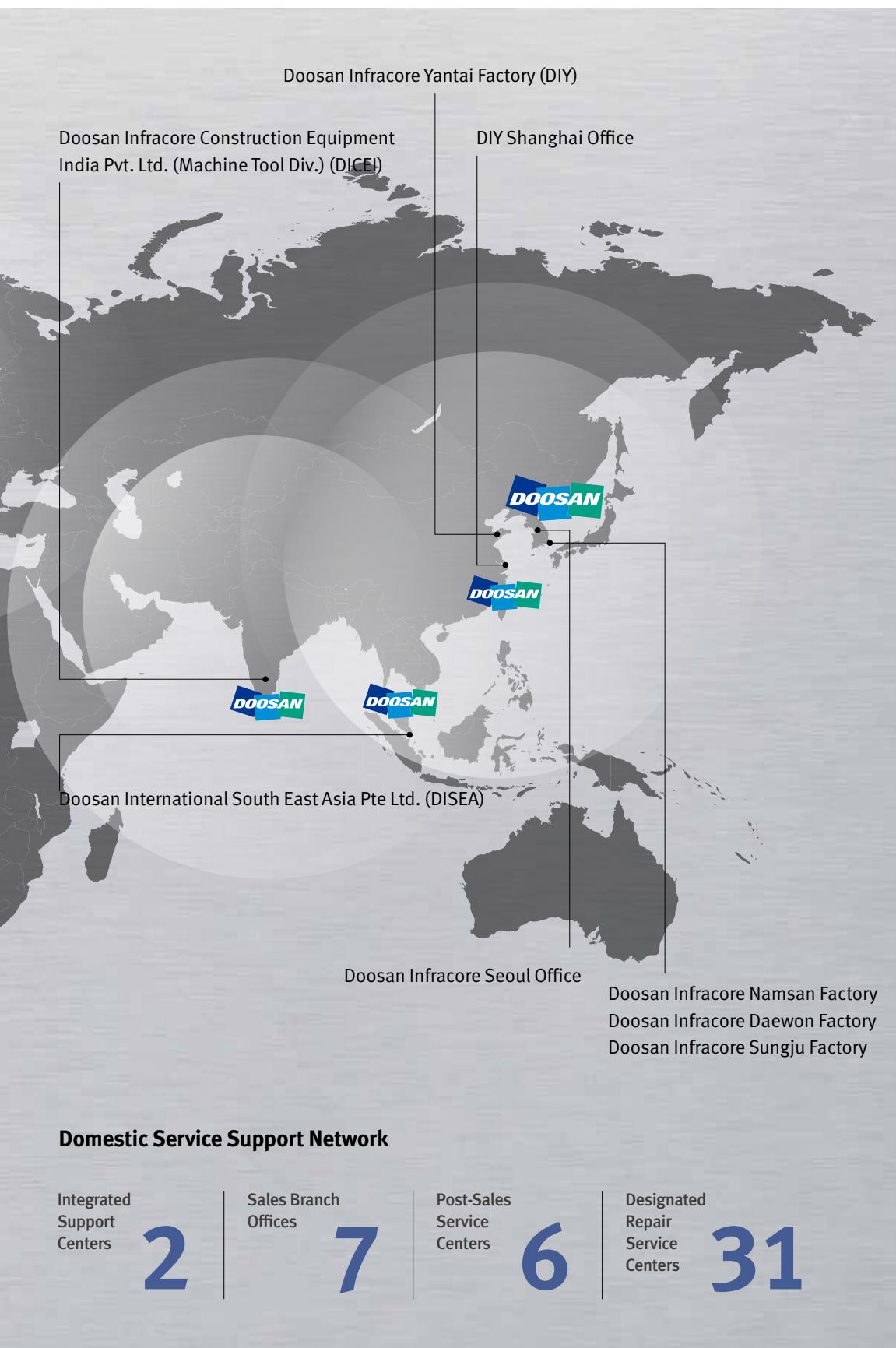
Factories

4

Technical Center: Sales Support, Service Support, Parts Support

Doosan Machine Tools' Global Network, Responding to Customer's Needs nearby, Anytime, Anywhere

Doosan machine tools provides a system-based professional support service before and after the machine tool sale by responding quickly and efficiently to customers' demands. By supplying spare parts, product training, field service and technical support, we can provide top class support to our customers around the world.



Customer Support Service

We help customers to achieve success by providing a variety of professional services from pre-sales consultancy to post-sales support.

Supplying Parts



- Supplying a wide range of original Doosan spare parts
- Parts repair service

Field Services



- On site service
- Machine installation and testing
- Scheduled preventive maintenance
- Machine repair

Technical Support



- Supports machining methods and technology
- Responds to technical queries
- Provides technical consultancy

Training



- Programming / machine setup and operation
- Electrical and mechanical maintenance
- Applications engineering

Major Specifications

DNM 5AX series



Description	UNIT	DNM 200/5AX	DNM 350/5AX
Max. spindle speed	r/min	12000	12000
Spindle motor power	kW (Hp)	18.5 / 11 (24.8 / 14.8)	
Tool shank	Taper	ISO #40, 7/24 TAPER	
Travels (X, Y, Z)	mm (inch)	400 / 435 / 500 (15.8 / 17.1 / 19.7)	600 / 655 / 500 (23.6 / 25.8 / 19.7)
Number of tools	ea		30
Table size	mm (inch)	Ø200 (Ø7.9)	Ø350 (Ø13.8)
Travels (A, C)	deg		150 / 360
NC system	-	DOOSAN-FANUC i	FANUC / HEIDENHAIN



Doosan Machine Tools

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* For more details, please contact Doosan.

* The specifications and information above-mentioned may be changed without prior notice.